UNITED STATES DISTRICT COURT

SOUTHERN DISTRICT OF CALIFORNIA

08 FEB 19 PM 2: 12

In the Matter of the Search of

7267 Camino Degrazia, Unit 22 San Diego, California

CLERK, U.S. DISTRICT COURT CUTHERN DISTRICT OF CALIFORNIA APPLICATION AND AFFIDAVIT FOR SEARCH WARRANT

DEPUTY

CASE NUMBER:

28 MJ 0484

I, Todd Walbridge, being duly sworn depose and say:

I am a Special Agent of the Federal Bureau of Investigation and have reason to believe that on the property or premises known as:

See Attachment A

in the Southern District of California there is now concealed a certain person or property, namely:

See Attachment B

which is:

Evidence, fruits of crime, property designed for use or used in committing criminal offenses including violations of Title 18, United States Code, Sections 1030 and 1832. The facts to support a finding of probable cause are as follows:

See attached Affidavit of Todd Walbridge continued on the attached sheet and made a part hereof. X Yes

TODD WALBRIDGE

Special Agent

Federal Bureau of Investigation

Sworn to before me, and subscribed in my presence February 19, 2008 at San Diego, California:

UNITED STATES MAGISTRATE JUDGE

Attachment A

The residence of Bradley Dierking, which is located at 7267 Camino Degrazia, Unit 22, San Diego, California.

ATTACHMENT B

Authorization is sought to search for and seize evidence that Bradley Dierking accessed the computer network of Geary Interactive without authority, including the website www.andreasroell.com, defaced the website and reservations system for Miraval Resort at www.miravalresort.com, and accessed and copied leads from one or databases of Geary Interactive without authority in violation of Title 18, United States Code, Sections 1030 and 1832. Authorization to search includes any detached structures from the primary premises if such additional structures exist. This authorization includes the search of physical documents and includes electronic data to include deleted data, remnant data and slack space. The seizure and search of computers and computer media will be conducted in accordance with paragraph 29 of the affidavit submitted in support of this warrant. Items to be seized includes the following:

- a. All computer systems, software, peripherals and data storage devices.
- b. All temporary and permanent files and records of any kind relating to Geary Interactive, andreasroell.com, Miraval Resorts, University of Phoenix and the Institute for Professional Development including but not limited to computer logs, database files and communications;
- c\ All temporary and permanent files and records reflecting unauthorized access to the Geary Interactive computer network; and,
- d. All records and documents that identify the person(s) using any seized computers.

AFFIDAVIT IN SUPPORT OF APPLICATION FOR SEARCH WARRANT

- I, Todd Walbridge, Special Agent of the Federal Bureau of Investigation (FBI), being duly sworn, hereby declare as follows:
- 1. I am employed as a Special Agent of the Federal Bureau of Investigation (FBI) and have been so for more than four years. I am currently assigned to the Cyber Squad in the San Diego Division. I have received training in general law enforcement and in Cyber investigations including crimes committed utilizing computers and computer networks, such as computer intrusions, denial of service attacks and malicious code. I have experience in investigations concerning Cyber crimes, white collar crimes and violent crimes within the Criminal and Cyber Divisions of the FBI. I have participated in criminal investigations involving computer intrusions, bank fraud, investment fraud, bank robberies, fugitives, innocent images and kidnappings. Prior to my employment as a Special Agent, I was employed in the computer technology field for more than eight years.
- 2. Since this affidavit is being submitted for the limited purpose of seeking authorization for a search warrant, I have not set forth every fact learned during the course of the investigation.
- 3. This affidavit is in support of an application by the United States of America for a warrant to search for evidence, fruits, and instrumentalities of violations of federal law including Title 18, United States Code, Sections 1030 (computer hacking) and 1832 (theft of trade secrets) criminal activity as described in Attachment B, located at the residence of Bradley Dierking, 7267 Camino Degrazia, Unit 22, San Diego, California 92111, as described in Attachment A.

FACTS SUPPORTING PROBABLE CAUSE

4. Geary Interactive is an online/digital advertising agency

whose services include website design, online marketing, search engine marketing, e-commerce and technology solutions. Geary Interactive is based in San Diego, California. Miraval Resort is a luxury resort and spa with locations in Tucson, Arizona and in Costa Rica. Miraval Resort was one of Geary Interactive's most prestigious clients. Geary Interactive was the online advertising agency for Miraval Resort. Geary personnel designed and programmed the Miraval Resort's website (www.miravalresort.com). Geary was responsible for maintaining and updating the content on the website, to include database management of the online reservation system.

- 5. On June 7, 2007, Geary Interactive was notified by Miraval Resort of an unauthorized change made to the reservations page on Miraval Resort's website. Miraval was alerted to a change in their website by telephone calls received from their customers who were attempting to book a visit to the luxury resort and spa. The reservations page had been defaced and said, "ANDREAS ROELL IS A HOMOSEXUAL" and "LAURIE KUHN IS A STUPID FUCKING JEW." The attacker's activities caused the reservations page to be taken offline for four days. Miraval Resort also has terminated its relationship with Geary Interactive.
- 6. Geary Interactive staff were assigned to determine the circumstances of the breach of their systems and the defacement of the Miraval website. The web server log files were reviewed for any unusual external access to the servers. Under normal conditions, only Geary Interactive's IP address(es) should show up in the logs. In the logs they discovered several unknown IP addresses accessing their system around the date and time of the compromise. They searched all

of the server logs for similar IP addresses. This search revealed the compromised areas in their network that were being accessed and used to exploit the servers' databases. The File Transfer Protocol (FTP)½ logs and Web Access Logs revealed that another domain owned and operated by Geary Interactive, andreasroell.com, was being used to deface the Miraval Resort Website. Geary Interactive discovered that the attacker was using phpMyAdmin² to conduct malicious activity.

- 7. Geary Interactive discovered that the attacker also accessed and may have downloaded educational leads for Geary Interactive's client, University of Phoenix. These leads are purchased by the University of Phoenix at \$5 to \$100 per lead. The compromised database contained 21,678 leads. Geary Interactive explained that these leads can be sold to any educational institution. If the leads were sold at the minimum purchase price of \$5 per lead, the financial gain would be approximately \$108,390.
- 8. Other Geary Interactive clients were affected by additional malicious activity. The Institute for Professional Development (IPD) is another educational client of Geary Interactive. The IPD database, which allows IPD campuses to access and view potential student leads so that they may be contacted, was accessed and usernames and/or

²"phpMyAdmin is an open source tool written in PHP intended to handle the administration of MySQL over the Internet. Currently it can create and drop databases, create/drop/alter tables, delete/edit/add fields, execute any SQL statements, and manage keys on fields." - Wikipedia (htttp://en.wikipedia.org)

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25 26 passwords for the affected IPD campuses and then contact them with their new passwords. Geary Interactive's ProFTPd3/ logs indicated unauthorized 9.

passwords were changed and/or deleted. This affected approximately

30-40 IPD campuses. Geary Interactive was forced to reset/reassign

- access of their system began on May 14, 2007 and continued through June 14, 2007. These ProfTPd logs show FTP sessions originating from 70.166.27.13, starting on May 14, 2007 and continuing through June 8, ProFTPd logs recorded the following unauthorized access: 2007. Thirteen events on May 14, 2007; six events on May 16, 2007; and nine events on June 4, 2007.
- 10. On August 23, 2007, I performed an IP trace route using the Internet website/tool, http://visualtraceroute.visualware.com. results indicate that IP Address 70.166.27.13 resolves back to mail.castlead.com via Cox Communication, more specifically Castle & Associates, also known as Castle Advertising, 2470 E. Street, San Diego, California (www.castlead.com). These results were confirmed on January 3, 2007, when Cox Communication provided subpoena results indicating that the IP Address 70.166.27.13 was assigned to Castle Advertising, 2470 E Street, San Diego, California.
- 11. Bradley John Dierking is a former employee of Geary Interactive who left to take a job with Castle Advertising/EDU Interactive. Castle Advertising and Geary Interactive previously had a close business relationship. They were advertising partners in which Castle Advertising handled the traditional advertising and Geary

^{3/&}quot;ProfTPd is an FTP server." - Wikipedia (htttp://en.wikipedia.org)

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Interactive handled the interactive/online advertising for their shared clients. However, Castle Advertising began losing clients as the clients decreased their investments in traditional advertising and invested more money in online/interactive advertising with Geary Interactive. This resulted in the deteriorating of the Geary/Castle relationship.

- Castle Advertising has employed Dierking as the Interactive 12. interactive/online Manager and Programming Director for their advertising component named EDU Interactive. EDU Interactive was developed by Castle Advertising in response to their clients' online/interactive needs and to help them retain clients who were moving away from print and media advertising to online advertising. David Castle is listed as the Owner/Partner of EDU Interactive on their website, www.eduinteractive.com. EDU Interactive shares the same address as Castle Advertising and consists of many of the same staff members. A profile of Dierking appears on the EDU Interactive Interactive's targeted clients are educational website. EDU institutions.
- 13. Andreas Roell and Laurie Kuhn, the persons slandered on the Miraval Resort's website, are employees of Geary Interactive. Roell is the President and Chief Executive Officer and Kuhn is the Strategic Planning and Analytics Manager for Geary Interactive. According to both, Dierking did not get along with either Roell or Kuhn and this strife inevitably led to his resignation on April 30, 2007.
- 14. Dierking was employed by Geary Interactive as their Lead Programmer from May 15, 2005 until April 30, 2007. As the Lead Programmer, Dierking 's job duties included designing and programming

client websites and databases. He was also responsible for controlling access to the website content and to the back end databases through the assignment of usernames and passwords. He had unlimited access to all of Geary Interactive's clients' websites, databases and content contained on those websites.

- 15. On or around May 29-30, 2007, Andreas Roell (President of Geary Interactive) contacted both David Castle and Brad Dierking to inform them that Dierking was in violation of his non-compete and non-disclosure agreements that he had signed with Geary Interactive. Roell threatened legal action against Dierking. This may have been the event that precipitated the attack on Geary.
- 16. As part of its investigation of the computer intrusion, Geary Interactive utilized a program called "maos trap" to log attempted computer intrusions and possibly further identify the intruder. On June 12, 2007, Geary Interactive logged the following attempted computer intrusions:

Date	Time	Username	Password	IP Address
06/12/20	07 16:35:40	johnm	cat\$711T	68.183.189.165
06/12/20	07 16:36:29	chris	lethal55	68.183.189.165
06/12/20	07 16:39:28	adloc3	Noc31vcB	72.25.103.119

The captured usernames and passwords were active but were old. They date from the time that Dierking set up and managed the database. Geary Interactive avoided another computer intrusion by preventing access to the phpMyAdmin application on the web server. Successfully accessing that application would open the door to the database server which contained University of Phoenix leads and Miraval Resort website content.

17. On or around June 14, 2007, the intruder regained access to andreasroell.com using Zend^{4/} (andreasroell.com was the original site that was compromised and used to deface the Miraval Resort website). While employed at Geary Interactive, Dierking used the website andreasroell.com to do his testing. Zend was used to create a backdoor on the andreasroell.com site. Zend acted as a phpMyAdmin tool that allowed FTP access to the web server. Zend does not leave the traces that one would see if the intruder had used phpMyAdmin because it does not write logs like phpMyAdmin. The intruder was forced to use Zend because Geary Interactive had eliminated access to the phpMyAdmin web server after the defacement of the Miraval Resort website.

- 18. The intruder used FTP to upload his scripts used in the computer intrusion. Geary Interactive could not block FTP access because they have approximately 200-300 FTP sites that their clients need to use in order to upload content to their web sites. By using the Zend program, the intruder was able to access the databases and make changes and copy tables.
- 19. Dierking appears to be well versed in Zend, MySQL, and PHP and has posted multiple articles referencing the use of Zend on his website, www.bradino.com. A query of the Whois.net database confirmed that the website, www.bradino.com, is registered to Brad Dierking 7267 Camino Degrazia, California. Under the, "About" section of www.bradino.com, there is a picture of Dierking along with text about him stating, "...I am now a PHP/MySQL Developer working full-time at

^{4/ &}quot;The Zend Engine is an open source scripting engine (a Virtual Machine), commonly known for the important role in the web automation language PHP." - Wikipedia (http://en.wikipedia.org)

a leading Online Advertising Agency in Downtown San Diego."

- 20. The defacement of the Miraval website occurred on June 7, 2007 and originated from IP Address 66.27.52.190. This IP address resolves back to Road Runner HoldCo, LLC, a Time Warner Cable company. On August 21, 2007, Time Warner Cable provided subpoena results indicating that the IP address 66.27.52.190 is assigned to Mission Valley Library, 2123 Fenton Parkway, San Diego, California 92108-4739.
- 21. On August 22, 2007, Ignacio Lucero, Branch Manager of the Mission Valley Branch Library, explained that the library does not monitor people's access to the library's Internet computers. There are no logs or sign up sheets to determine who used the computers. Their video surveillance is on a 24-hour loop, meaning it re-records over itself every 24-hours. The library also has an unsecured wireless network that can be accessed from the parking lot. There are no surveillance cameras covering the parking lot.
- 22. The Mission Valley Library, located at 2123 Fenton Parkway, San Diego, California, and Dierking's residence, located at 7267 Camino Degrazia Unit 22, San Diego, California, are approximately 2.9 miles apart according to Yahoo! Maps (www.maps.yahoo.com).
- 23. After June 8, 2007, Geary Interactive logged computer intrusions from IP Address, 72.25.103.119. ProFTPd logs show successful logins from username, zend, at IP Address 72.25.103.119. According to the ARIN database, IP Address 72.25.103.119 resolves back to DSL Extreme. On October 10, 2007, DSL Extreme provided subpoena results indicating that the IP Address 72.25.103.119 was assigned to Alesia Buchanan, P.O. Box 232, Del Mar, California, email address help@socalfreenet.org. ProFTPd logs recorded the following

unauthorized access: Seven events on June 8, 2007; fifteen events on June 12, 2007; and five events on June 13, 2007. The SoCalFreeNet.org network is an unsecured/open wireless network.

- 24. The "maos trap" described above shows two unauthorized breaches originating from IP Address, 68.183.189.165 on June 12, 2007. This IP Address also resolves back to DSL Extreme. On October 10, 2007, DSL Extreme provided subpoena results indicating that the IP address 68.183.189.165 was assigned Real Equity Assets, Inc., 302 Washington Street #152, San Diego, California, for Real Equity Assets, contact person Kreigan Brink. The Real Equity Assets network appears to be an unsecured/open wireless network.
- investigation has revealed the computer Additional 25. IP Addresses 68.183.189.165 from intrusions originating 72.25.103.119 occurred utilizing unsecured/open wireless networks belonging both Brink, doing business as Real Equity Assets, and Buchanan, doing business as SoCalFreeNet.org. Brink's address of 2470 B Street, Unit A, San Diego, California is located in the same geographic area in which free wireless access is offered by SoCalFreeNet.org. SoCalFreeNet.org is a non-profit group that builds and deploys free public wireless networks using Wi-Fi technology. Real Equity Assets appears on SoCalFreeNet.org's website as a sponsor.
- 26. Castle Advertising/EDU Interactive (located at 2470 E Street, San Diego, California) and Real Equity Assets (located at 2470 B Street, San Diego, California) are approximately 0.3 miles apart according to Yahoo! Maps (www.maps.yahoo.com).
- 27. On February 14, 2008, FBI agents surveilled Dierking leaving the offices of Castle Advertising shortly after 4:00 p.m. carrying

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what appeared to be a laptop computer bag. He placed the bag in the trunk of his car and, after a stop at a bar, drove to his home. Upon arriving, Dierking removed the laptop bag from this car and brought it into his home.

28. There is probable cause to believe that Dierking accessed the network of Geary Interactive repeatedly and from different locations suggesting the use of a laptop computer.

COMPUTER SEARCH PROTOCOL

29. With the approval of the court in signing this warrant, agents executing this search warrant will employ the following procedures regarding computers that may be found on the premises which may contain information subject to seizure pursuant to this warrant:

Forensic Imaging

a. There is probable cause to believe that the computer(s) used by Dierking to access Geary Interactive without authority are instrumentalities, and also may contain items that are fruits of crime – the various educational leads contained within the databases accessed without authority. Consequently, the computer is subject to seizure as provided at Rule 41(c)(2) and (c)(3), Fed.R.Crim.P., and will be seized and transported offsite for imaging. Once a verified image has been obtained and the data subjected to a preliminary review, any computers which do not appear to have been used to illegally access Geary Interactive will be returned to the owner. Images, however, will be retained for thorough examination. The imaging and preliminary review process, depending upon the number of computers seized, the volume of data contained on the computers,

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any steps taken by the owners to conceal the stolen data or use of that data and the software deployed on the computers, can take up to 30 days. It should be noted that some database programs cannot be searched by keywords without first extracting the data from the image and importing it into a new, clean compatible version of the database software on a separate, forensic computer. For computers that are retained, the owner may apply in writing to the undersigned for return of specific data which is not subject to seizure which the owner requires. The Federal Bureau of Investigation will reply in writing. In the event that the owner's request is granted, arrangements will be made for a copy of the requested data to be obtained by the owner. If the request is denied, the owner will be directed to Rule 41(g), Federal Rules of Criminal Procedure.

A forensic image is an exact physical copy of the hard drive or other media. It is essential that a forensic image be obtained prior to conducting any search of the data for information subject to seizure pursuant to this warrant. forensic image captures all of the data on the hard drive or other media without the data being viewed and without changing the data in any way. This is in sharp contrast to what transpires when a computer running the common Windows operating system is started, if only to peruse and copy data - data is irretrievably changed and lost. Here is why: When a Windows computer is started, the operating system proceeds to write of files about its status and operating hundreds new These new files may be written to places on the environment.

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hard drive that may contain deleted or other remnant data. That data, if overwritten, is lost permanently. In addition, every time a file is accessed, unless the access is done by trained professionals using special equipment, methods and software, the operating system will re-write the metadata for that file. Metadata is information about a file that the computer uses to manage information. If an agent merely opens a file to look at it, Windows will overwrite the metadata which previously reflected the last time the file was accessed. The lost information may be critical.

c. Special software, methodology and equipment is used to obtain forensic images. Among other things, forensic images normally are "hashed", that is, subjected to a mathematical algorithm to the granularity of 1038 power, an incredibly large number much more accurate than the best DNA testing available today. The resulting number, known as a "hash value" confirms that the forensic image is an exact copy of the original and also serves to protect the integrity of the image in perpetuity. Any change, no matter how small, to the forensic image will affect the hash value so that the image can no longer be verified as a true copy.

Forensic Analysis

d. After obtaining a forensic image, the data will be analyzed. Analysis of the data following the creation of the forensic image is a highly technical process that requires specific expertise, equipment and software. There are literally thousands of different hardware items and software programs that

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can be commercially purchased, installed and custom-configured on a user's computer system. Computers are easily customized by their users. Even apparently identical computers in an office environment can be significantly different with respect to configuration, including permissions and access rights, passwords, data storage and security. It is not unusual for a computer forensic examiner to have to obtain specialized hardware or software, and train with it, in order to view and analyze imaged data.

Analyzing the contents of a computer, in addition to requiring special technical skills, equipment and software also can be very tedious. It can take days to properly search a single hard drive for specific data. Searching by keywords, for example, often yields many thousands of "hits," each of which must be reviewed in its context by the examiner to determine whether the data is within the scope of the warrant. Merely finding a relevant "hit" does not end the review process. mentioned above, the computer may have stored information about the data at issue: who created it, when it was created, when was it last accessed, when was it last modified, when was it last printed and when it was deleted. Sometimes it is possible to recover an entire document that never was saved to the hard drive if the document was printed. Operation of the computer by non-forensic technicians effectively destroys this and other trace evidence. Moreover, certain file formats do not lend themselves to keyword searches. Keywords search text. Many common electronic mail, database and spreadsheet applications do

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not store data as searchable text. The data is saved in a proprietary non-text format. Microsoft Outlook data is an example of a commonly used program which stores data in a non-textual, proprietary manner- ordinary keyword searches will not reach this data. Documents printed by the computer, even if the document never was saved to the hard drive, are recoverable by forensic examiners but not discoverable by keyword searches because the printed document is stored by the computer as a graphic image and not as text. Similarly, faxes sent to the computer are stored as graphic images and not as text.

Analyzing data on-site has become increasingly impossible as the volume of data stored on a typical computer system has become mind-boggling. For example, a single megabyte of storage space is the equivalent of 500 double-spaced pages of text. A single gigabyte of storage space, or 1,000 megabytes, is the equivalent of 500,000 double-spaced pages of text. Computer hard drives are now capable of storing more than 100 gigabytes of data and are commonplace in new desktop computers. And, this data may be stored in a variety of formats or The sheer volume of data also has extended the time encrypted. that it takes to analyze data in a laboratory. Running keyword searches takes longer and results in more hits that must be Even perusing file individually examined for relevance. structures can be laborious if the user is well-organized. Producing only a directory listing of a home computer can result in thousands of pages of printed material most of which likely will be of limited probative value.

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to this warrant may require a range of data analysis techniques and may take weeks or even months. Keywords need to be modified continuously based upon the results obtained; criminals can mislabel and hide files and directories, use codes to avoid using keywords, encrypt files, deliberately misspell certain words, {delete files and take other steps to defeat law enforcement. In light of these difficulties, your affiant requests permission to use whatever data analysis techniques reasonably appear necessary to locate and retrieve digital evidence within the scope of this warrant.

Based on the foregoing, searching any computer or

All forensic analysis of the imaged data will be directed exclusively to the identification and seizure of information within the scope of this warrant.

REQUEST FOR SEALING

Premature disclosure of the search warrant, this affidavit, 30. andr this application and the attachments thereto may jeopardize the progress of the investigation by resulting in the destruction of volatile electronic data. Consequently, we request that the search warrant and related materials be sealed until further Order of the Court.

> Todd Walbridge, Special Agent Federal Bureau of Investigation

Subscribed and sworn to before me this 19th day of February, 2008:

WILLIAM MCCURINE, UNITED STATES MAGISTRATE JUDGE